

Claims

1. A measuring instrument for detecting a force, including:

- a carrier plate (3),
- a magnet (5),
- 5 - a magnetically sensitive element (6), and
- a tongue element (4), which protrudes from the carrier plate (3),

wherein between the tongue element (4) and the carrier plate (3), an air gap (7) is formed, in which the magnetically sensitive element (6) is disposed.

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2. The measuring instrument for detecting a force of claim 1, characterized in that the magnet (5) is mounted on the tongue element (4).

3. The measuring instrument for detecting a force of claim 1, characterized in that the magnet (5) is secured to the carrier plate (3).

4. The measuring instrument for detecting a force of one of claims 1-3, characterized in that the measuring instrument has a first magnet (5) and a second magnet (15), the first magnet (5) being disposed on the tongue element (4) and the second magnet (15) being disposed on the carrier plate (3).

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5. The measuring instrument for detecting a force of one of claims 1-4, characterized in that the tongue element (4) is embodied integrally with the carrier plate (3).

6. The measuring instrument for detecting a force of one of claims 1-5, characterized in that the tongue element (4) is embodied resiliently.

7. The measuring instrument for detecting a force of one of claims 1-6, characterized in that the measuring instrument has a stop (12, 13, 14) for limiting the motion of the tongue element (4).

8. The measuring instrument for detecting a force of claim 7, characterized in that a separate stop (14) is embodied on a plate element (2) which is joined to the tongue element, or that parts (12, 13) of the carrier plate (3) are embodied as a stop for the plate element (2) joined to the tongue element (4).

9. The measuring instrument for detecting a force of one of claims 1-8, characterized in that the tongue element (4) is embodied as a bar.

10. A method for detecting a force, characterized in that a force delivered via a movable tongue element (4) is converted into a relative motion between the tongue element (4) and a carrier plate (3), and the relative motion between the tongue element (4) and the carrier plate (3) leads to a change in a magnetic field intensity, which is detectable by a magnetically sensitive element (6) disposed in an air gap (7) between the carrier plate (3) and the tongue element (4).